FARM BUSINESS MANAGEMENT

INFORMATION UPDATE

Manitoba Agriculture
Farm Management

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GUIDELINES FOR ESTIMATING

DAIRY PRODUCTION COSTS

BASED ON A

40 COW HERD

This guide is designed to provide planning information and a format for calculating costs of production on a dairy enterprise. The production costs included in this budget are not intended as a cost study of the dairy industry in Manitoba.

The guideline can be useful for comparison purposes. Comparison of costs can be made with other farms; the farm over time; or comparing the plan at the beginning of the production period with the end.

The assumptions on which costs were calculated are clearly defined in the supporting pages. They were developed by using a combination of recommended practices and methods followed by a select group of producers. When interpreting these costs for an individual situation, adjustments may be required. Each assumption must be examined and adjustments made where necessary.

DAIRY PRODUCTION COSTS

40 COW HERD

	Per Cow	Your Costs
A. OPERATING COSTS		
Feed Costs:		
Dairy Ration	370.00	_____
Forage	438.00	_____
TOTAL FEED COSTS	$ 808.00	$_____
Bedding	$ 25.00	$_____
Veterinary & Medicine	47.00	_____
Breeding	60.00	_____
Dairy Supplies	45.00	_____
Marketing & Transportation	344.30	_____
Buildings & Equipment Repairs	71.25	_____
Utilities	90.00	_____
Insurance	29.68	_____
Replacement Cost	212.50	_____
Interest on Operating	8.66	_____
TOTAL OPERATING COSTS	$ 1,741.39	$_____
B. FIXED COSTS		
(1) Depreciation		
a) Buildings	$ 85.73	$_____
b) Equipment	149.85	_____
(2) Investment		
a) Buildings	$ 83.82	_____
b) Equipment	73.26	_____
c) Livestock	120.00	_____
TOTAL FIXED COSTS	$ 512.66	$_____
TOTAL FIXED & OPERATING COSTS	$2,254.05	$_____
C. LABOR COST		
73 hrs/cow @ $9.50/hr	$ 693.50	$_____
TOTAL COST	$2,947.55	$_____

FEED REQUIREMENTS

ASSUMPTIONS:

600 kg cow produces 18 litres/day of 3.6 kg per hectolitre B.F., An annual milk production of 5,500 litres/cow.

The cow will be supplied with 6.4 kg of a 16% commercial dairy ration and 15 kg of roughage.

Forages and dairy ration are valued at current market prices.

DAIRY RATION:

	%	kg
Barley	80%	5.1
32% Supplement	20%	1.3
		6.4 kg/cow/day

310 days X 6.4 kg/day = 1,984 kg/cow/year.

Dairy ration = approximately 2 tonnes/cow

2 tonnes X $185/tonne = $370.00/cow/year.

ROUGHAGE

15 kg roughage/day X 365 days = 5,475 kg

5.475 tonnes/cow X $80/tonne = $438.00/cow/year

OPERATING COSTS

BEDDING

Stanchion barn:
Approximately 1 tonne per cow/year @ $25.00/tonne.

VETERINARY & MEDICINE

Drugs - Blackleg, I.B.R., Mastitis, etc. - approximately $800.00.
Service - $40.00/hour assumed 12 visits (assumed 2 hours/visit for first three trips, 1 hour/visit for remaining trips).
Mileage - $1.00 per km one way. Assumed distance to be 40 km.

BREEDING COST

Costs vary depending upon: (1) price/vial of semen, (2) services charge/visit, and (3) number of services/conception. Assumed 2 services @ $15.00/vial of semen and $15.00/visit.

Semen:	$30.00 ($15.00 x 2)
Services:	30.00 ($15.00 x 2)
Total Costs:	$60.00/cow

DAIRY SUPPLIES & MISCELLANEOUS

Chlorine, Filters, Soap, Acid, Udder Wash, Teat Dip, etc.
approximately $1800.00 for herd/year.

MARKETING & TRANSPORATION COSTS

	Cost/hl
Milk Hauling	$2.00
M.S.Q. Administration	0.08
Pool Administration	0.22
Advertising	0.52
CDC Levy	3.44
	$6.26 per hl.

OPERATING COSTS (Cont.)

BUILDING & EQUIPMENT REPAIRS

Three to four percent of buildings and equipment repairs and maintenance are based on average annual investment in buildings and equipment or one half of new costs. For purposes of this budget we have assumed $2,850.00 for the herd as adequate for this cost.

UTILITIES

Hydro, telephone and fuel costs were estimated from producer records. For purposes of this budget $3600.00 for the herd was assumed.

INSURANCE - fire, hail and wind

Building & Equipment . . . . . 60¢/$100.00 of coverage

Herd . . . . . 50¢/$100.00 of coverage

Public Liability . . . . . $30.00 approximately

REPLACEMENT COST

Assumed culling rate of 25%. Therefore 10 cows of the 40 were replaced each year. It was further assumed that 1 of the 10 culls died.

Buy 10 cows replacements @ $1300.	$13,000
Sell 9 cull cows @ $500	4,500
	$ 8,500

INTEREST ON OPERATING

Interest was calculated by taking 1/2 of the operating costs and multiplying it by an annual interest rate of 12%. The figure is the cost for 1 month.

LABOR

Milking, feeding, bookkeeping & miscellaneous.
Assumed 8 hours/day @ $9.50/hour.

FIXED COSTS

DEPRECIATION - Buildings & Equipment

- 10 year straight line on equipment.
- 20 year straight line on buildings.

$$\frac{\text{Original Cost - Salvage Value}}{\text{Useful Life}}$$

Buildings: $\frac{\$76,200 - 7,620}{20}$ = \$3,429/herd/year or \$85.73/cow/year.

Equipment: $\frac{\$66,600 - 6,660}{10}$ = \$5,994/herd/year or \$149.85/cow/year.

INVESTMENT

Buildings & Equipment

- An average of 1/2 the capital costs at a rate of 8% was used.

$$\frac{\text{Original Cost + Salvage Value}}{2} \times 8\%$$

Buildings: $\frac{\$76,200 + 7.620}{2} \times 0.08$ = \$3,352.80/herd/yr. or \$83.82/cow/yr.

Equipment: $\frac{\$66,600 + 6,660}{2} \times 0.08$ = \$2,930.40/herd/yr. or \$73.26/cow/yr.

HERD

- Assumed a purebred herd of 40 cows valued at \$1500/cow = \$60,000 for the herd.
- The investment on the herd was calculated using 8% interest cost on the average investment for the year.

  \$60,000 @ 8% = \$4,800 for herd or \$120/cow/year.

CAPITAL COSTS
(Buildings and Equipment Assumed New)

BUILDINGS

Barn - single storey 40' X 106' @ $10/ft^2	$42,400
(includes concrete, materials, air intakes & labor)	
- 40 comfort stalls (i.e. 4' X 5'10" to 6'0") @ $80	3,200
- 2 maternity pens (10' X 12') @ $700	1,400
- plumbing (includes 22 water bowls @ $40 plus piping)	1,000
Milkhouse - 18' X 22' @ $25/ft^2	10,000
(includes concrete, materials, septic tank & labor)	
Hay Shed - 36' X 96' (includes concrete, materials & labor)	15,000
Steel Grain Bin - 11 tonne capacity	3,200
(includes bin, augers, ladder, foundation & labor)	
TOTAL BUILDINGS	$76,200

EQUIPMENT

Complete Milking System (i.e. 2" pipeline with 4 units)	$15,000
Bulk Tank and Accessories	9,200
(i.e. 2725 lit. capacity and 3 H.P. condenser)	
Milk House Equipment	2,000
(i.e. stainless steel sink, 40 gallon hot water tank, etc.)	
Pressure System (i.e. 1½ H.P. pump and 100 gallon tank)	3,100
Gutter Cleaner	6,000
Ventilation and Controls	950
(i.e. 1 X one speed 12" fan, 1 X two speed 16" fan and 1 X one speed 18" fan)	
Manure Pump (i.e. 7½ H.P.) and	
Storage (i.e. pad plus earthern walls)	14,000
Electric Wiring	4,500
3 Milk Meters @ $283	850

OTHER

Tractor - $30,000 @ 20% (dairy share)	6,000
½ Ton Truck - $10,000 @ 50% (dairy share)	5,000
TOTAL EQUIPMENT	$66,600
TOTAL BUILDINGS AND EQUIPMENT	$142,800

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